

## REMARKS/ARGUMENTS

Claims 1-42 were pending in the present application. The present response adds new claims 43 and 44, leaving pending in the application claims 1-44. Reconsideration of the pending claims and consideration of the new claims is respectfully requested.

### **I. Rejection under 35 U.S.C. §102**

Claims 1-10, 12-21, 32, 33, and 37-42 are rejected under 35 U.S.C. §102(e) as being anticipated by *Iturralde* (US 5,955,139).

The invention defined by each of Applicants' claims 1, 12, 21, and 32 provides real-time monitoring and control for "depositing a plurality of thin film layers on a substrate" when "manufacturing a multilayer, thin film interference filter." *Iturralde* does not disclose the monitoring or control of the deposition of multilayer thin films, or the manufacturing of thin-film interference filters.

*Iturralde* is related to a different technology, as *Iturralde* discloses the monitored deposition of a single layer of material onto a substrate, particularly the deposition of a single "thin film of a desired thickness" onto "a wafer in a thin film processing chamber" (col. 3, lines 14-16). *Iturralde* does not disclose "depositing a plurality of thin film layers" on a single substrate as required by Applicants' claims 1, 12, 21, and 32. *Iturralde* also does not disclose "controlling the deposition" of multiple layers on that single substrate "based on the monitored output signals." *Iturralde* therefore cannot anticipate Applicants' claims 1, 12, 21, and 32. Claims 2-10, 13-20, 33, and 37-42 depend from these claims and therefore also cannot be anticipated by *Iturralde*. Applicants therefore respectfully request that the rejection with respect to claims 1-10, 12-21, 32, 33, and 37-42 be withdrawn.

### **II. Rejection under 35 U.S.C. §103**

Claims 11, 22-31, and 34-36 are rejected under 35 U.S.C. §103(a) as being obvious over *Iturralde* in view of *Aspnes* (US 5,798,837).

As discussed above, *Iturralde* does not teach or suggest "depositing a plurality of thin film layers on a substrate" or "controlling the deposition" of multiple layers "based on the monitored output signals" in order to manufacture a multilayer, thin film interference filter as required by Applicants' independent claims 1, 12, 21, and 32. The Office Action of

September 22, 2003, states that *Aspnes* teaches that a monochromatic light source can have the structure of a broad band light source filtered by a monochrometer to insure accurate measurements. Such teaching, however, would not make up for the deficiencies in *Iturralde* with respect to independent claims 1, 12, 21, and 32. *Iturralde* and *Aspnes* both teach the deposition of a single layer on a particular substrate. Further, *Iturralde* and *Aspnes* relate to technologies such as the deposition of thin films on semiconductor wafers. Applicants propose a new technology in the present application, namely the monitored, controlled creation of DWDM devices, or multilayer thin film interference filters. All claims in the pending application are limited to this new technology, and claims 43 and 44 have been added in part to more clearly emphasize the distinction. *Iturralde* and *Aspnes* do not teach or suggest each limitation of the independent claims, either alone or in combination, and cannot render these claims obvious. Dependent claims 11, 22-31, and 34-36 similarly cannot be rendered obvious. Applicants therefore respectfully request that the rejection with respect to claim 11, 22-31, and 34-36 be withdrawn.

### **III. Conclusion**

In view of the above, it is respectfully submitted that the application is now in condition for allowance. Reconsideration of the pending claims, consideration of the newly presented claims, and a notice of allowance is respectfully requested.

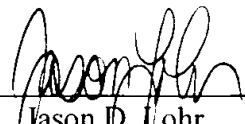
The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 50-1703, under Order No. TWI-12810.

**A duplicate copy of the transmittal cover sheet attached to this Response is provided.**

Respectfully submitted,

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Dated: September 24, 2003

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